

U.S. Antarctic Marine Living Resources Program

2010-2011 Weekly Field Reports

Cape Shirreff, Livingston Island

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Seabirds:

1. Chinstrap chicks have begun to fledge this week. On 15 February we started weighing fledglings immediately before they depart to obtain a measure of condition. We will continue to collect these data throughout the fledging period. To date, we have weighed 323 fledglings and have an average mass of 3232g. The heaviest fledgling weighed in at 4300g and the lightest was 2250g.
2. Of the nineteen pairs of brown skuas that we are monitoring we have completed measurements on four territories, eight nests are still active and seven nests have failed. We started collection of 48 day measurements of brown skua chicks on 16 February. We collected these weights and measurements at 48 days of age to determine their sex and to assess their condition.
3. There is a juvenile macaroni penguin that has been consistently seen molting by our chinstrap colony 3. Another rockhopper penguin was also spotted this week, but it only stuck around for about half a day.
4. We deployed one PTT on a freshly molted chinstrap penguin as part of the overwinter study. We plan on deploying more instruments as weather permits.
5. A significant portion of the week was spent compiling and proofing data, along with general camp maintenance.

Pinnipeds:

6. Seven attendance mother/pup pairs remain in the study out of the original 31. Leopard seal predation is the likely cause of death for the others. The mean number of foraging trips is 10.5 since pupping, and mean trip length this week was 2.2 days, similar to the last several weeks.
7. We recovered another TDR-GPS (Mk10) instrument from an attendance fur seal. Only one TDR-GPS remains out on an attendance fur seal and we plan to retrieve it this week.
8. Fur seal diet sampling was completed this week with the collection of the final 10 scat samples from areas of suckling females.
9. Systematic surveys of defined areas of the Cape for the 500 per annum fur seals tagged as pups continued this week. This will give us a measure of tags sighted per unit of effort for different cohorts and for different areas of the Cape.



10. To date, with the combined effort of opportunistic and systematic re-sight surveys, we have seen the following percent return for the last ten year classes: (1997) 1.0%; (1998) 0.6%; (1999) 4.4%; (2000) 1.6%; (2001) 3.4%; (2002) 1.0%; (2003) 0.8%; (2004) 0.0%; (2005) 1.4%; (2006) 2.4%; (2007) 1.0% (7 individuals), (2008) 1%; (2009) 2.2%. A total of 104 different known-age individuals have been seen so far.
11. We completed our fourth and final CCAMLR pup weights this week, weighing and tagging 100 pups. The average mass for males was 15.7kg and for females it was 13.1kg.
12. We will start recovering TDRs (time-depth recorders) from adult female leopard seals this week. The TDRs have been recording dive information for the past month. We deployed a VHF transmitter on these seals so to keep track of their movements around the Cape, for over-winter haul-out data.
13. On 17 February, we recaptured and retrieved a TDR with photo capabilities (a Little Leonardo) that was first deployed on 3 February on an adult female leopard seal. This study is an international collaboration with Japanese researchers. The images we get from this instrument are amazing evidence of leopard seal foraging, dive behavior, and interactions with other leopard seals.



Weather:

14. This week the temperature peaked at 5.6°C and had a low of -0.8°C; the mean was 2.8°C. This was the warmest week since our arrival in early November. Mean wind speed for the week was 17.2mph and the max. gust was 47.0 mph. This week the winds have been approximately 30% out of the east and 70% out of the west. Precipitation for this week was 0.44 inches, bringing the total to 4.45 for the season.

Camp:

15. Our camp is running smoothly and all power and communication system are in operation. Daily communications have been established with Palmer Station on the single side band radio, as well as daily email checks with R/V Moana Wave.
16. Yesterday we got another 3 walls of the camp scraped and painted. Those were the walls in the worst condition; the exterior paint of the other walls seems to be holding up well. We have been also taking care of the window covers, by scraping, repainting and rebuilding them when needed.
17. As part of a snow level monitoring project, four graduated snow posts have been placed around the Cape. Two are close to the penguin colonies, one is near a fur seal study beach and the last one is near camp. This will allow us to accurately measure snow depth at the beginning penguin and seal breeding seasons each year.

Submitted by AMLR staff currently residing at the Cape Shirreff field camp, Livingston Island.

